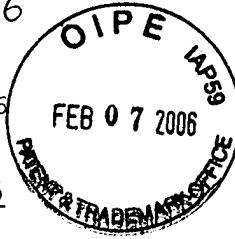


02/8/06

Appln. No. 09/736,069  
Appeal Brief dated February 7, 2006



Attorney Docket No. US 000045

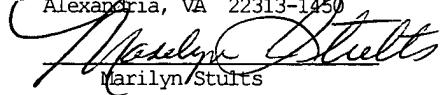
**IN THE UNITED STATES PATENT  
AND TRADEMARK OFFICE**

Applicant(s): Doreen Y. CHENG, et al.  
Serial No. : 09/736,069  
Filed : December 13, 2000  
For : THE ARCHITECTURE OF A  
HAVi-WEB BRIDGE  
Art Unit : 2154  
Examiner : Ashokkumar B. Patel  
Confirm No. : 7727

CERTIFICATE OF EXPRESS MAILING

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Marilyn Stults

In the event that this Paper is late filed, and the necessary petition for extension of time is not filed concurrently herewith, please consider this as a Petition for the requisite extension of time, and to the extent not tendered by check attached hereto, authorization to charge the extension fee, or any other fee required in connection with this Paper, to Account No. 14-1270

**APPEAL BRIEF**

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S I R :

On December 15, 2005, Appellants, through their attorney, appealed from the final rejection of claims 1, 4, 8 and 11-15 set forth in an Office Action dated September 20, 2005 for the above-referenced application. The Notice of Appeal was received by the Patent Office with the appropriate fee on December 19, 2005 and therefore this Appeal Brief is due February 19, 2006. This Appeal Brief is being timely filed within two months from the date of receipt by the U.S. Patent and Trademark Office of the Notice of Appeal.

02/09/2006 MAHMED1 00000050 09736069

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BEST AVAILABLE COPY

This Appeal Brief is being timely filed within two months from the date of receipt by the U.S. Patent and Trademark Office of the Notice of Appeal.

This Appeal Brief is being submitted pursuant to 37 CFR 41.37 with the appropriate fee. The Appeal Brief supports the patentability of claims 1, 4, 8 and 11-15. For the reasons set forth below, it is respectfully submitted that the rejections set forth in the September 20, 2005 Office Action should be reversed.

**A. REAL PARTY IN INTEREST**

The real party in interest of the above-identified application is U.S. Philips Corporation of New York, New York by virtue of an assignment of an undivided 100% interest in the application by the inventor.

**B. RELATED APPEALS AND INTERFERENCES**

At this time, there are no related appeals or interferences.

**C. STATUS OF CLAIMS**

Claims 1, 4, 8 and 11-15 are pending in this application and all have been finally rejected by Examiner Ashokkumar B. Patel of Group Art Unit 2154. Appellant is therefore appealing the final rejection of these claims.

Claim 1 is a first independent claim upon which claim 4

depends. Claim 8 is a second independent claim upon which claims 11 and 12 depend either directly or indirectly. Claim 13 is a third independent claim upon which claims 14 and 15 depend. The appealed claims are set forth in the Claims Appendix attached hereto.

**D. STATUS OF AMENDMENTS**

An Amendment under 37 CFR 1.116 was filed on November 2, 2005 after issuance of the September 20, 2005 Final Office Action. Examiner Patel indicated that this Amendment has been entered for the purposes of appeal.

**E. SUMMARY OF CLAIMED SUBJECT MATTER**

In the following Summary of Claimed Subject Matter, the references to the specification correspond to the specification as originally filed on December 13, 2000, and the reference numbers in parenthesis are the corresponding components illustrated in Figs. 2 and 3.

The present claimed invention as defined by independent claim 1 is directed to a bridge that is configured to facilitate communications between a first network (130) of Non-IP-compatible entities and a second network (170) of IP-compatible entities, comprising a Non-IP to IP interface (220) to facilitate communications between an application entity (230) on the first

network (130) and a Web server (180) on the second network (170) comprising an IP Web client (330) that is operably coupled to the second network (170) to selectively translate a first set of communications between the Web server (180) and the first network (130), and to pass a second set of communications between the Web server (180) and the first network (130) without translation, a Non-IP Web proxy (320) that is operably coupled to the IP Web client (330) and the first network (130), and is configured to make the IP Web client (330) compliant with middleware that is associated with the Non-IP network (130), a Non-IP Web proxy client (310) that is operably coupled to the Non-IP Web proxy (320) and the first network (130), and is configured to allow the application entity (230) to access the Web server (180).

Interface 220 is referred to as a HAVi-to-Web glue layer in the specification and is described generally at page 6, lines 8-11 and more specifically at page 6, line 13 to page 7, line 20.

The bridge also includes an IP to Non-IP interface (260) to facilitate communications between a Web browser (210) on the second network (170) and a Non-IP device entity (250) on the first network (130), comprising a Non-IP Web server (350) that is operably coupled to the second network (170), to selectively translate a first set of communications between the Web browser (210) and the first network (130), and to pass a second set of communications between the Web browser (210) and the first

network (130) without translation, a Web service executor (360) that is operably coupled to the Non-IP web server (350) and to the first network (130), and is configured to provide access to the Non-IP device entity (250), a Web page generator (370) that is operably coupled to the Non-IP Web Server (350) and to the first network (130), and is configured to generate web pages for presentation to the Web browser (210), and a translation manager (380) that is operably coupled to the Non-IP Web server (350), the Web service executor (360), and the Web page generator (370), and is configured to provided service-to-user-interface and message-to-methods translation services. Interface 260 is referred to as a Web-to-HAVi glue layer in the specification and is described generally at page 7, lines 23-28 and more specifically at page 7, line 30 to page 14, line 3.

The present claimed invention as defined by independent claim 8 is directed to a Non-IP network (130) comprising at least one Non-IP-compatible device (250) and a bridge that includes a Non-IP to IP interface (220) to facilitate communications between an application entity (230) on the Non-IP network (130) and a Web server (180) on an IP network (170) comprising an IP Web client (330) that is operably coupled to the IP network (170), to selectively translate a first set of communications between the Web server (180) and the Non-IP network (130), and to pass a second set of communications between the Web server (180) and the

non-IP network (130) without translation, a Non-IP Web proxy (320) that is operably coupled to the IP Web client (330) and the Non-IP network (130), and is configured to make the IP Web client (330) compliant with middleware that is associated with the Non-IP network (130), a Non-IP Web proxy client (310) that is operably coupled to the Non-IP Web proxy (320) and the Non-IP network (130), and is configured to allow the application entity (230) to access the Web server (180), and an IP to Non-IP interface (260) to facilitate communications between a Web browser (210) on the IP network (170) and the at least one Non-IP-compatible device (250) on the Non-IP network (130) comprising a translation manager (380) suitable to provide service-to-user interface and message-to-methods' translation services. Interface 220, also referred to as a HAVi-to-Web glue layer, is described generally at page 6, lines 8-11 and more specifically at page 6, line 13 to page 7, line 20. Interface 260, also referred to as a Web-to-HAVi glue layer, is described generally at page 7, lines 23-28 and more specifically at page 7, line 30 to page 14, line 3.

The present claimed invention as defined by independent claim 13 is directed to a method of enabling interactions between a Non-IP network (130) and an IP network (170), comprising establishing an IP connection between a browser (210) on the IP network (170) and a server (350) at a bridge element (260),

communicating a web page corresponding to the server (350) to the browser (210), receiving a user input from the browser (210) to the server (350), based on the web page, processing the user input to produce one or more commands related to an object on the Non-IP network (130), and communicating the one or more commands to the object, wherein a first set of communications are selectively translated via a translation manager (380) operatively connected to the Non-IP Web network (130) and suitable to provide service-to-user-interface and message-to-methods translation services, and passed between the browser (210) and the Non-IP network (130), and a second set of communications are passed between the browser (210) and the Non-IP network (130) without translation. This method is described in the specification, for example, at page 8, line 21 to page 9, line 18.

**F. GROUNDS OF REJECTIONS TO BE REVIEWED ON APPEAL**

The issues presented for review are:

1. whether U.S. Patent Publication No. US 2001/0047431 (Eytchison) is entitled under 35 USC 119(e) to the benefit of the filing date of U.S. provisional patent application Ser. No. 60/181,406 in order to be available as prior art citable against the patentability of the claims herein; and

2. assuming arguendo that Eytchison is entitled under 35 USC 119(e) to the benefit of the filing of the '406 provisional patent application, whether the subject matter of claims 1, 4, 8, 11 and 12 is patentable under 35 USC 103 over the teachings of Eytchison in view USP 6,523,696 (Saito et al.).

**G. ARGUMENT**

**1. The Pending Rejection**

Claims 1, 4, 8 and 11-15 are rejected under 35 USC 103 as being unpatentable over U.S. Patent Publication No. US 2001/0047431 (Eytchison) in view U.S. Patent No. 6,523,696 (Saito et al.).

**2. Appellant's Arguments-Issue 1**

Eytchison should not be available as prior art citable against the patentability of claims 1, 4, 8 and 11-15 because it should not be entitled under 35 USC 119(e) to the benefit of the filing date of U.S. provisional patent application Ser. No. 60/181,406.

Eytchison (U.S. patent application Ser. No. 09/780,289) has a filing date of February 8, 2001 and claims priority under 35 USC 119(e) of U.S. provisional patent application No. 60/181,406 filed February 9, 2000, a copy of which is included in the Evidence Appendix.

The present application was filed December 13, 2000 which is before the February 8, 2001 filing date of Eytchison's '289 non-provisional patent application. As such, if Eytchison is not entitled to the benefit of the filing date of the '406 provisional patent application under 35 USC 119(e), then it is not available as prior art against the patentability of the rejected claims.

Eytchison is not entitled to the benefit of the filing date of the '406 provisional patent application under 35 USC 119(e) because the provisional application (U.S. Provisional Application No. 60/181,406) upon which Eytchison claims priority does not support the disclosure relied upon by the Examiner in formulating the rejection of the claims set forth in the September 20, 2005 Office Action.

Specifically, the Examiner states that Eytchison shows features of the claimed invention with specific and repeated reference to Fig. 6 of Eytchison (see the Office Action dated September 20, 2005, pages 5-13). However, Fig. 6 of Eytchison is not present in the '406 provisional patent application.

In spite of this deficiency, the Examiner alleges that pages 11 and 12 of the '406 provisional patent application show elements which enable the Eytchison invention. However, the components on pages 11 and 12 are not described in the '406

provisional patent application and moreover, differ significantly from the schematic shown in Fig. 6 of Eytchison.

The illustrations in the '406 provisional patent application, without an accompanying description thereof, simply do not provide an enabling disclosure of the subject matter disclosed in Eytchison in accordance with 35 USC 112 to enable Eytchison to be entitled to the benefit of the filing date of the '406 provisional patent application. The Examiner's proposed interpretation of the drawings of the '406 provisional patent application is believed to be based at least in part on the detailed disclosure in Eytchison, but reliance on such disclosure is impermissible in order to support the presence of an enabling disclosure in the earlier filed '406 provisional patent application.

Since Provisional Application No. 60/181,406 does not support the disclosure upon which the Examiner relies (the schematic shown in Fig. 6), the rejection of claims 1, 4, 8 and 11-15 under 35 USC 103 based upon Eytchison is not proper, and if the Examiner wishes to maintain the rejection, the Examiner must find a new reference to replace Eytchison.

### **3. Appellant's Arguments-Issue 2**

Even if Eytchison is entitled under 35 USC 119(e) to the benefit of the filing of the '406 provisional patent application,

Eytchison in combination with Saito et al. does not disclose, teach or suggest all of the embodiments of the invention.

Specifically, the embodiments of the invention set forth in claims 1 and 8 include a Non-IP to IP interface having an IP Web client, a Non-IP Web proxy and a Non-IP Web proxy client, and an IP to Non-IP interface including a translation manager. Claim 1 further recites that the IP to Non-IP interface includes a Non-IP web server, a Web service executor and a Web page generator. Thus, there are two interfaces in these embodiments, each containing unique components. As shown in Fig. 3, the two interfaces, designated 220, 260, are separated to enable, for example, simultaneous translation of data from the Internet 170 to the HAVi network 130 and translation of data from the HAVi network 130 to the Internet 170.

Also, there are dedicated components which perform the Non-IP to IP data translation (through interface 220) and other, dedicated components which perform the IP to Non-IP data translation (through interface 260). Thus, each component is used in only one type of data translation.

By contrast, in Eytchison, there is a single bridge or protocol translator 506 between the Internet 502 and the HAVi network 504 (not two interfaces as in the claimed embodiments) and the components involved in the data translation perform functions during translation of messages from the Internet to the

HAVi network and also during translation of messages from the HAVi network to the Internet (not dedicated components in each interface as in the claimed embodiments). Eytchison does not disclose, teach or suggest providing multiple bridges or protocol translators between an IP network and a Non-IP network, each with dedicated components.

In view of the absence of all of the features of claims 1 and 8 in Eytchison, as well as Saito et al., one skilled in the art could not modify Eytchison in view of Saito et al. and arrive at the embodiments of the invention set forth in claims 1 and 8, as well as those set forth in claims 4, 11 and 12 which depend from claim 1 or claim 8.

#### H. CONCLUSION

The disclosure in Eytchison which is relied upon by the Examiner to support the rejection of the pending claims is not supported by the disclosure in the '406 provisional patent application from which it claims priority under 35 USC 119(e). In view of an earlier filing date of the provisional application from which priority is claimed by the instant application, Eytchison is therefore not available as prior art citable against the patentability of the pending claims.

Moreover, the cited prior art does not disclose, teach or suggest all of the features of independent claims 1 and 8,

namely, two interfaces between a Non-IP network (e.g., a HAVI network) and an IP network (e.g., the Internet), and therefore cannot be combined to render the embodiments set forth in these claims unpatentable.

In view of the foregoing, reconsideration and withdrawal of the rejection of claims 1, 4, 8 and 11-15 under 35 USC 103 are respectfully requested.

FEE

A Credit Card Authorization Form in the amount of \$500.00 is enclosed herewith in payment of the requisite fee for filing this brief in support of the Appeal.

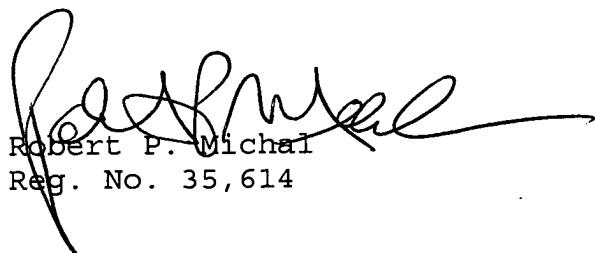
\* \* \* \* \*

In view of the foregoing, it is respectfully submitted that the Examiner has erred in rejecting all of the appealed claims and a reversal of such claims by this honorable Board is solicited.

A copy of the appealed claims is appended herewith.

Please charge any additional fees or credit any overpayment  
to Deposit Account No. 14-1270.

Respectfully submitted,



Robert P. Michal  
Reg. No. 35,614

Frishauf, Holtz, Goodman & Chick, P.C.  
220 Fifth Avenue  
New York, New York 10001-7708  
Tel. (212) 319-4900  
Fax (212) 319-5101  
RPM/ms

Encl.: Claims Appendix  
Evidence Appendix  
Credit Card Authorization Form in the Amount of \$500.00

**CLAIMS APPENDIX**

Claim 1. A bridge that is configured to facilitate communications between a first network of Non-IP-compatible entities and a second network of IP-compatible entities, comprising:

5 a Non-IP to IP interface to facilitate communications between an application entity on the first network and a Web server on the second network comprising:

10 an IP Web client that is operably coupled to the second network to selectively translate a first set of communications between the Web server and the first network, and to pass a second set of communications between the Web server and the first network without translation;

15 a Non-IP Web proxy that is operably coupled to the IP Web client and the first network, and is configured to make the IP Web client compliant with middleware that is associated with the Non-IP network;

a Non-IP Web proxy client that is operably coupled to the Non-IP Web proxy and the first network, and is configured to allow the application entity to access the Web server; and

20 an IP to Non-IP interface to facilitate communications between a Web browser on the second network and a Non-IP device

entity on the first network, comprising:

25 a Non-IP Web server that is operably coupled to the second network, to selectively translate a first set of communications between the Web browser and the first network, and to pass a second set of communications between the Web browser and the first network without translation;

30 a Web service executor that is operably coupled to the Non-IP web server and to the first network, and is configured to provide access to the Non-IP device entity;

a Web page generator that is operably coupled to the Non-IP Web Server and to the first network, and is configured to generate web pages for presentation to the Web browser; and

35 a translation manager that is operably coupled to the Non-IP Web server, the Web service executor, and the Web page generator, and is configured to provide service-to-user-interface and message-to-methods translation services.

Claims 2-3 (Cancelled).

Claim 4. The bridge as claimed in claim 1, wherein the Non-IP Web proxy is configured to facilitate communications between the Web server and a Non-IP service.

Claims 5-7 (Cancelled).

Claim 8. A Non-IP network comprising  
at least one Non-IP-compatible device; and  
a bridge that includes:  
a Non-IP to IP interface to facilitate communications  
5 between an application entity on the Non-IP network and a Web  
server on an IP network comprising:  
an IP Web client that is operably coupled to the IP network,  
to selectively translate a first set of communications between  
the Web server and the Non-IP network, and to pass a second set  
10 of communications between the Web server and the non-IP network  
without translation;  
a Non-IP Web proxy that is operably coupled to the IP Web  
client and the Non-IP network, and is configured to make the IP  
Web client compliant with middleware that is associated with the  
15 Non-IP network;  
a Non-IP Web proxy client that is operably coupled to the  
Non-IP Web proxy and the Non-IP network, and is configured to  
allow the application entity to access the Web server; and  
an IP to Non-IP interface to facilitate communications  
20 between a Web browser on the IP network and the at least one Non-  
IP-compatible device on the Non-IP network comprising:  
a translation manager suitable to provide service-to-user  
interface and message-to-methods translation services.

Claims 9-10 (Cancelled).

Claim 11. The Non-IP network as claimed in claim 8, wherein the IP to Non-IP interface further includes:

5 a Non-IP Web server that is operably coupled to the IP network, and is configured to appear as an Internet server to the Web browser;

a Web service executor that is operably coupled to the Non-IP Web server and to the Non-IP network, and is configured to provide access to the at least one Non-IP-compatible device; and

10 a Web page generator that is operably coupled to the Non-IP Web server and to the Non-IP network, and is configured to generate web pages for presentation to the Web browser;

wherein the translation manager is operably coupled to the Non-IP Web server, to the Web service executor, and to the Web page generator.

Claim 12. The Non-IP network as claimed in claim 11, wherein

the Non-IP Web server is configured to selectively translate a first set of communications between the Web browser and the Non-IP network, and to pass a second set of communications 5 between the Web browser and the Non-IP network without

translation.

Claim 13. A method of enabling interactions between a Non-IP network and an IP network, comprising:

establishing an IP connection between a browser on the IP network and a server at a bridge element,

5 communicating a web page corresponding to the server to the browser,

receiving a user input from the browser to the server, based on the web page,

10 processing the user input to produce one or more commands related to an object on the Non-IP network, and

communicating the one or more commands to the object, wherein a first set of communications are selectively translated via a translation manager operatively connected to the Non-IP Web network and suitable to provide service-to-user-interface and 15 message-to-methods translation services, and passed between the browser and the Non-IP network, and a second set of communications are passed between the browser and the Non-IP network without translation.

Claim 14. The method of claim 13, further including:

determining a status corresponding to the object on the Non-IP network,

creating a web page corresponding to a status of the object,  
5 and  
communicating the web page from the server to the browser.

Claim 15. The method of claim 13, further including:  
receiving an access request from a Non-IP-compatible  
application,  
communicating the access request to a Web server on the IP  
5 network,  
receiving a web page corresponding to the Web server, and  
communicating messages corresponding to the web page to the  
Non-IP-compatible application.

EVIDENCE APPENDIX

Copy of U.S. provisional patent application Ser. No. 60/181,406

60/60/60  
60/60/60  
U.S. PTO  
100-670



<b>CERTIFICATE OF EXPRESS MAILING</b>	
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JC 70 U 181406 pro	

## PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53 (b)(2).

Docket Number 50P3812

### INVENTOR/APPLICANT

<u>LAST NAME</u>	<u>FIRST NAME</u>	<u>MIDDLE INITIAL</u>	<u>RESIDENCE (City and Either State or Foreign Country)</u>
EYTCHISON	EDWARD	B.	MILPITAS, CA

### TITLE OF THE INVENTION (280 characters max)

**HAVi - VHN Bridge Solution**

### ENCLOSED APPLICATION PARTS (check all that apply)

Specification Number of Pages 14  Small Entity Statement  
 Drawing(s) Number of sheets \_\_\_\_\_  Other (specify) \_\_\_\_\_

### METHOD OF PAYMENT (check one)

A check or money order is enclosed to cover the Provisional filing fees

The Commissioner is hereby authorized to charge  
filing fees and credit Deposit Account Number: 19-3195 PROVISIONAL  
FILING FEE  
AMOUNT \$ 150.00

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

No  
 Yes, the name of the U.S. Government agency and the Government contract number are: \_\_\_\_\_

DIRECT CORRESPONDENCE TO:  
Intellectual Property Department  
Sony Electronics Inc.  
1 Sony Drive - MD T1-1  
Park Ridge, NJ 07656-8003  
Phone 201/930-7951 Fax 201/930-6854

Respectfully submitted,

  
RICHARD H. BUTT  
Registration No. 40,932  
Date FEBRUARY 9, 2000

**PROVISIONAL APPLICATION FOR PATENT FILING ONLY**

**PROVISIONAL APPLICATION**

**HAVi / VHN Bridge Solution**

Inventor

Edward B. Eytchison

**DETAILED DESCRIPTION OF THE INVENTION**

(See attached pages)

# HAVi / VHN Bridge Solution



## **Edward B. Eytchison**

Sr. Engineering Manager  
Sony Distributed Systems Laboratory  
Sony Electronics Inc  
[ed@arch.sel.sony.com](mailto:ed@arch.sel.sony.com)  
Tel:+1.408.955.5210

# Necessity for HAVi/VHN Integration

- Heterogeneous networking technologies will continue to exist both in and outside the home
- Consumers will benefit by the integration of HAVi and non-HAVi networks which enables diverse applications to control all aspects of the home:
  - HAVi devices can access and control activities outside the home (HAVi Organization and UP&P Consortium are working together to make this happen)
  - A printer in the non-HAVi network could be used to print a AV content from a AV-HDD
  - A device in the automation network can tell a HAVi device when to power on/off
  - Non-HAVi devices bridging to a HAVi network could send video from a security camera to a HAVi AV storage device

# Considerations For Moving Forward

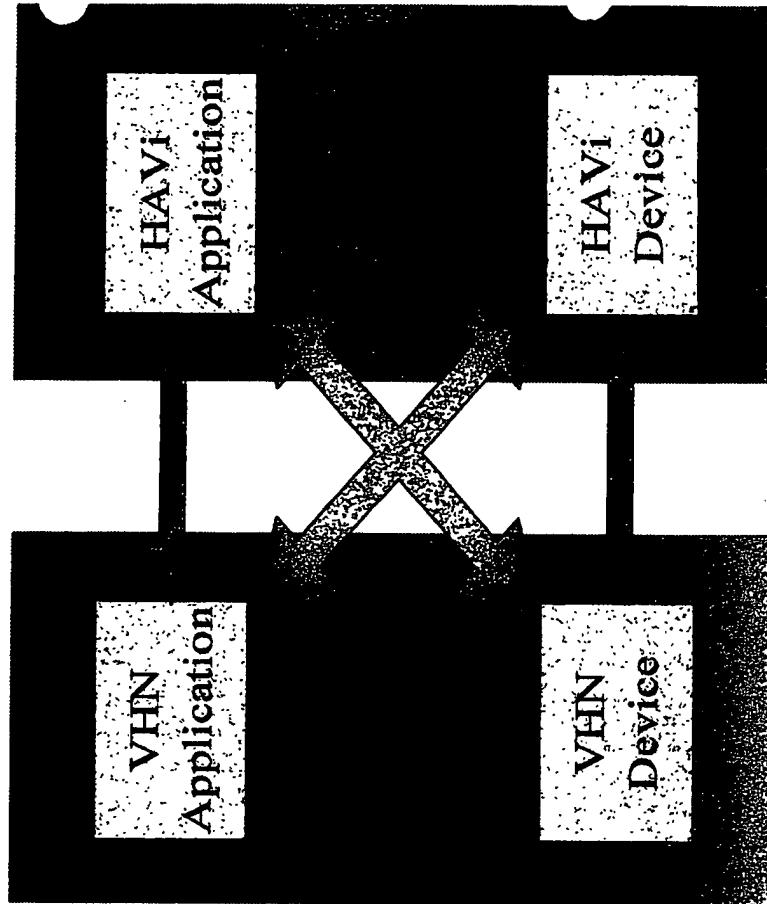
- Preservation of existing HAVi protocols and services as defined by the Compliance Test Specification must be maintained (i.e., performance issues, bus configurations)
- Preserve the normal behavior of HAVi compliant devices when controlled by automation and information networks (i.e., security, resource management, parental control, streams, etc.)
- Overall system robustness and reliability must be omnipresent

## Considerations For Moving Forward (2)

- Integrating HAVi and VHN networks must prove cost effective and non-intrusive to average consumers
- Installation cost must be minimized and intuitive (no more difficult than connecting a VCR to a TV)
- Significant command and control aspects of heterogeneous components should be accessible to/from HAVi devices
- User configurations should not be any more difficult than programming a VCR (most consumers have a problem doing this)

# Goals - Complete Interoperability

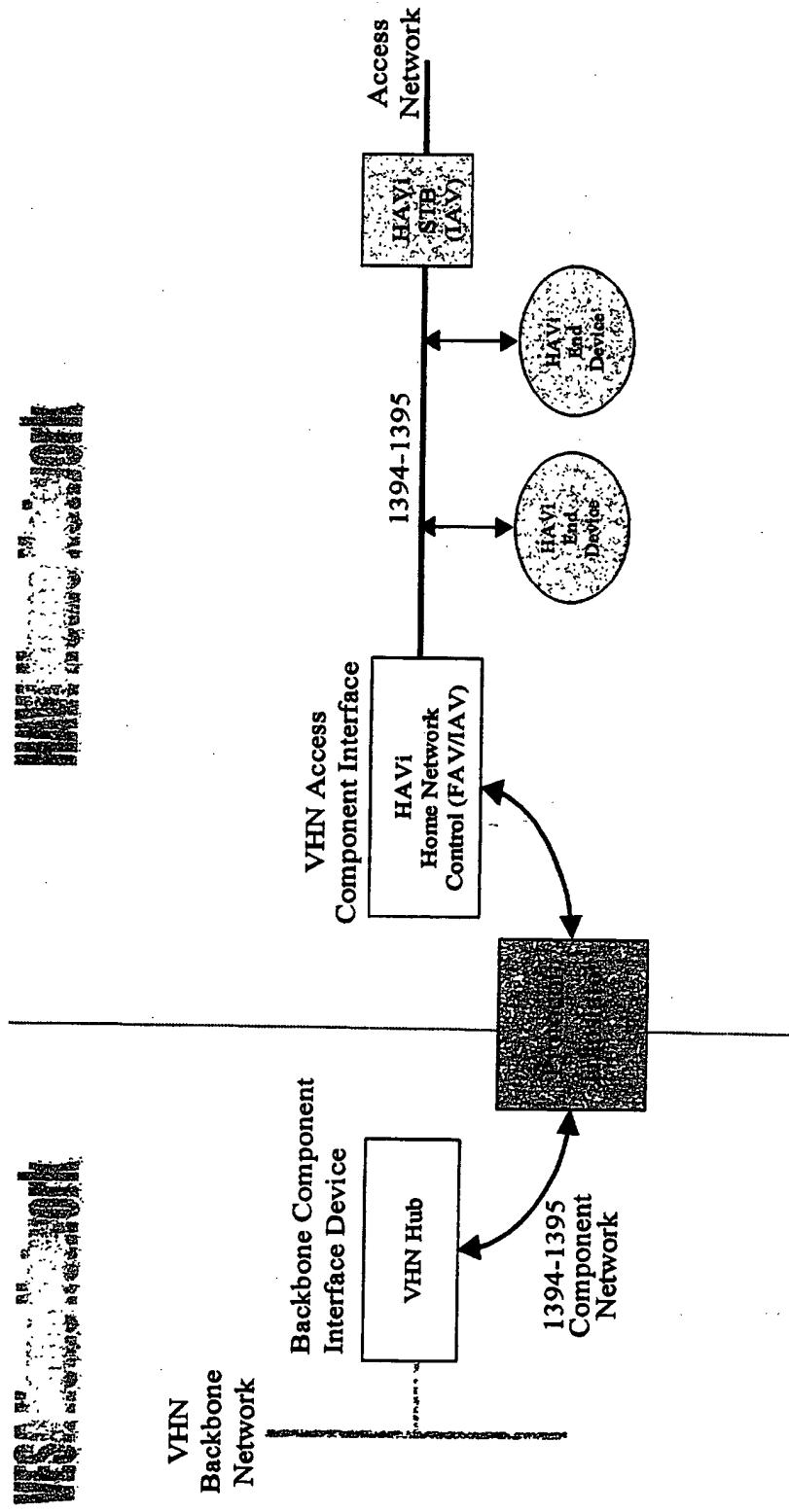
- Any HAVi network element can talk to any VHN network entity and vice versa
  - Allow VHN Device to:
    - Talk to HAVi device
    - Talk to HAVi application
  - Allow HAVi Device to:
    - Talk to VHN device
    - Talk to VHN application
  - Allow VHN Application to:
    - Talk to HAVi application
    - Talk to HAVi device
  - Allow HAVi Application to:
    - Talk to VHN application
    - Talk to VHN device



# Minimum HAVi Elements Required for Bridging

- Messaging System
  - Mappings between HAVi messages (IEC 61883.1 FCM) to XML RPC
- Registry
  - Mapping between HAVi discovery methods and attributes to HNB&IR
- HAVi DCM/FCM
  - Mapping between HAVi components and VHN devices
- Event Manager
  - Mapping between HAVi events and VHN events
- CMM
  - Mapping between GUIDs and IP addresses
- DDI/L2 UI
  - Mapping between HAVi UI and HTML

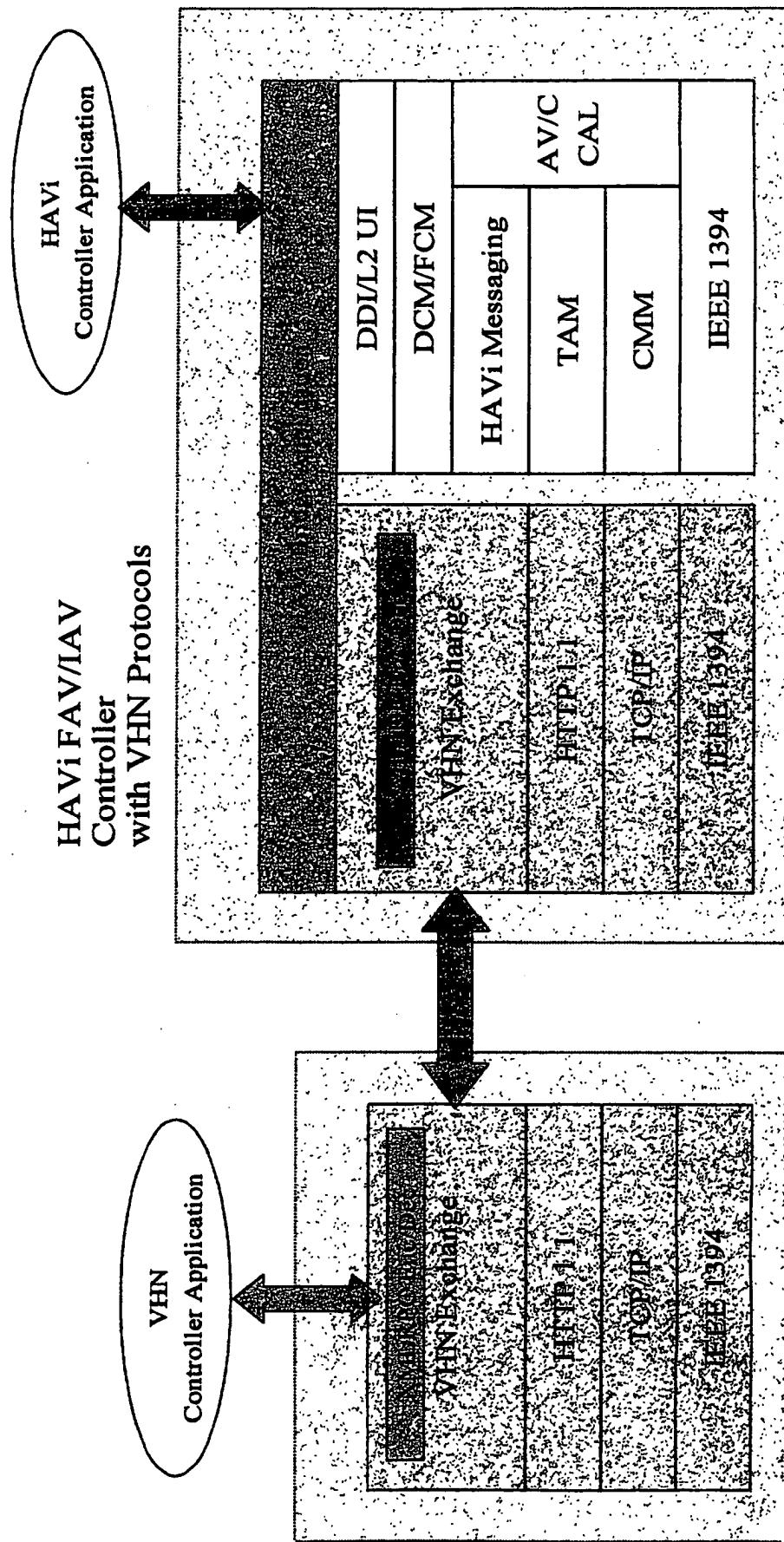
# Abstract view of a VHN & HAVi Network



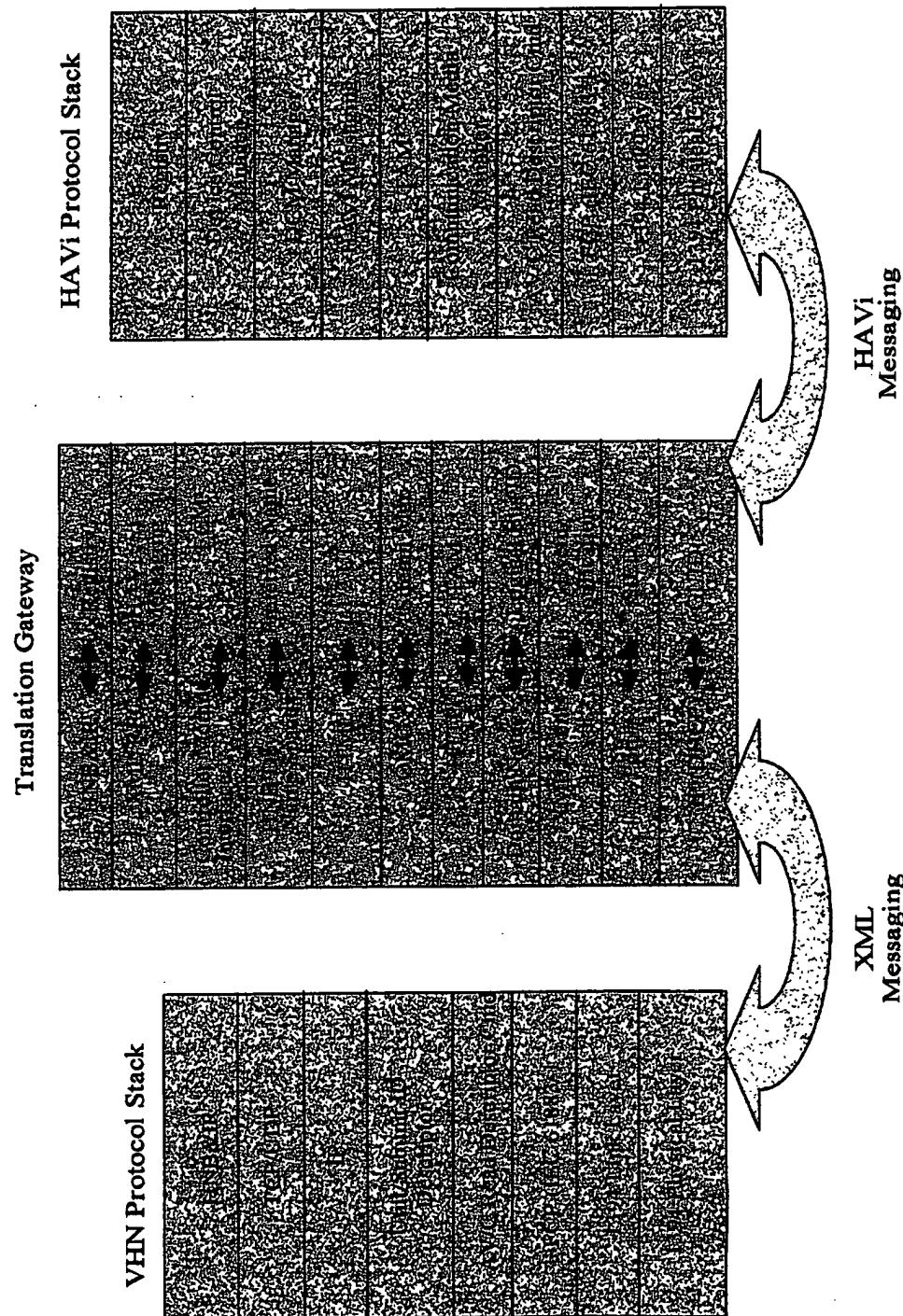
# HAVi/VHN Gateway Initialization Process

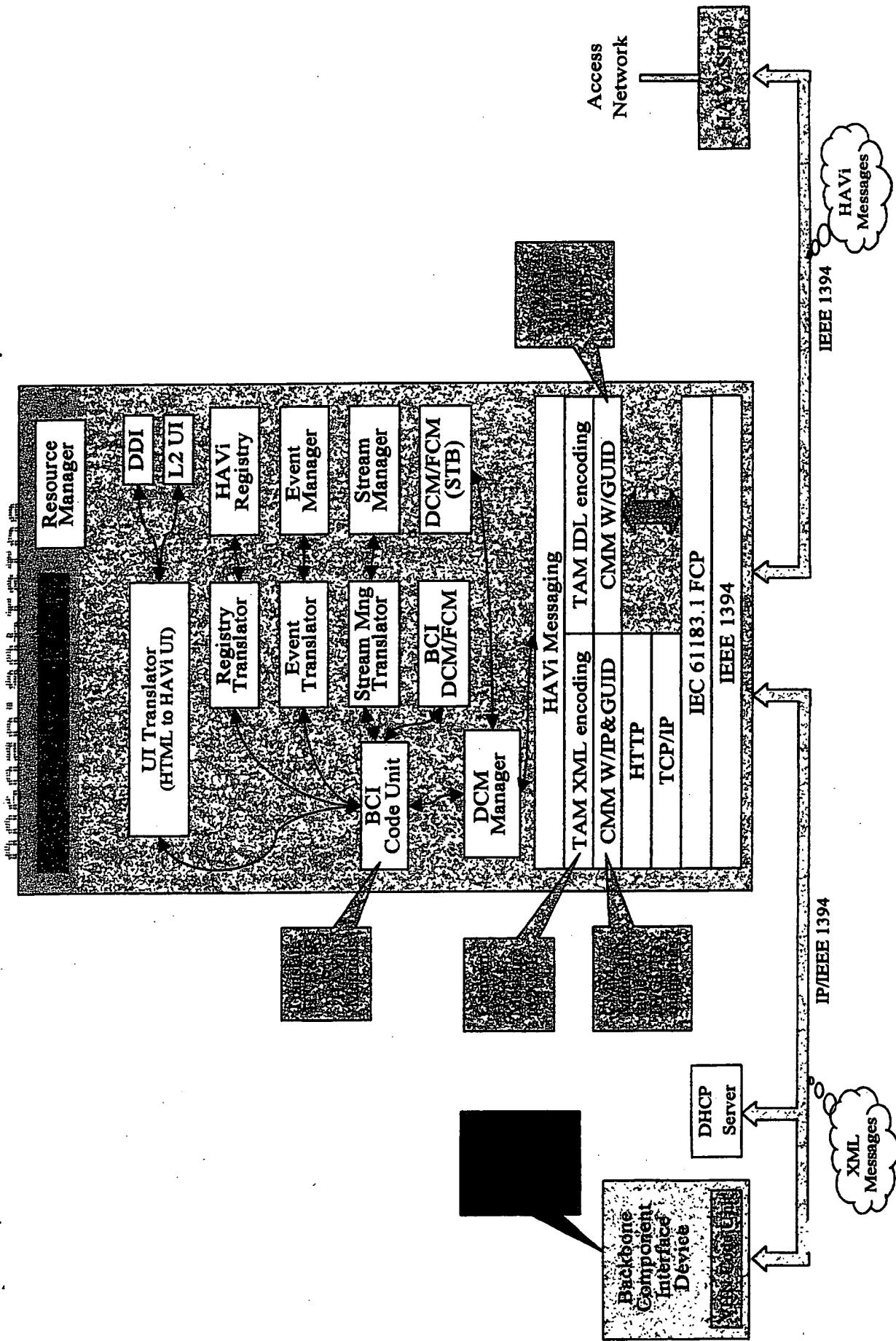
- When a VHN device is detected the HAVi Gateway (or a HAVi Application Module) will:
  - Load VHN Code Unit
  - Assign IP address to all HAVi devices using VHN's DHCP Server or use an autonomous address allocation
  - Map HAVi network address (1394 bus ID) to HAVi preferred name or logical bus name
  - Update the HNB&IR to reflect all HAVi services and events
    - add either a new HN level or device interface level
    - Add XML interface to all HAVi devices
    - Translate DCM/FCM methods and attributes to XML interface

# HAVi/VHN Bridge Protocol Stack



# VHN/HAVi Protocol Stack Mapping





# VHN Application Booting Sequence

- A VHN Proxy Application will:
  - Register with HAVi Messaging System to get SEID
  - Maintain mapping of SIED and IP address
  - Map “interface unique name” to HUID/Preferred Name
  - Map HNB entries to HAVi Registry
  - Map XML events to HAVi Event Manager
  - Map HTML to HAVi L1/L2 UI

# HAVi App Booting Sequence

- A HAVi Proxy Application will:
  - Call upon DHCP Server to get IP address
    - IP address cross referenced to SEID and GUID
  - Locate HNB by sending broadcast messages
  - Register itself with local HNB
    - IP address, device model, user configurable device name, etc
  - Create a “unique device name”
  - Map HAVi events to XML events
  - Map callbacks to HNB&IR
  - Map HAVi L1/L2 UI to HTML

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